

WHAT IS CLAIMED IS:

1. An information security microcomputer having an information security function comprising:
 - an encrypting unit encrypting and decrypting information;
 - an authenticating unit authenticating an external device; and
 - 5 a processor performing entire control of said information security microcomputer, and stopping at least a part of a function of said information security microcomputer when said authenticating unit cannot perform the authentication.
2. The information security microcomputer according to claim 1, wherein
 - said processor issues a random number to said external device, decrypts information received from said external device, and attempts to
 - 5 authenticate said external device by determining whether the decrypted value matches with said random number or not.
3. The information security microcomputer according to claim 1, wherein
 - said processor stops an entire operation of said information security microcomputer when said authenticating unit cannot perform the
 - 5 authentication.
4. The information security microcomputer according to claim 1, wherein
 - said processor stops an operation of said encrypting unit when said authenticating unit cannot perform the authentication.
5. The information security microcomputer according to claim 1, wherein
 - said processor operates not to output a correct result of an operation of said encrypting unit when said authenticating unit cannot perform the

5 authentication.

6. The information security microcomputer according to claim 1,
wherein

said processor operates in either a debug mode or a general mode,
and

5 said information security microcomputer further includes a mode-
lock circuit locking the mode at debug mode.

7. A program developing device comprising:

an information security microcomputer having an information
security function, and a main body controlling said information security
microcomputer to assist program development, wherein

5 said main body includes a control unit performing authentication
with respect to said information security microcomputer, and issuing a
command to control said information security microcomputer; and

said information security microcomputer includes:

10 an authenticating unit performing authentication with respect to
said main body, and

a processor performing entire control of said information security
microcomputer, and stopping at least a part of a function of said
information security microcomputer.

8. A program developing system comprising:

an information security microcomputer having an information
security function;

5 a main body controlling said information security microcomputer to
assist program development; and

a computer issuing a command to said information security
microcomputer via said main body, wherein

authentication is performed between at least two of said information
security microcomputer, said main body and said computer.

9. The program developing system according to claim 8, wherein said information security microcomputer includes:
an encrypting unit encrypting and decrypting information;
an authenticating unit authenticating said main body or said
5 computer; and
a processor performing entire control of said information security microcomputer, and stopping at least a part of a function of said information security microcomputer when said authenticating unit cannot perform the authentication.
10. The program developing system according to claim 8, wherein the authentication performed between at least two of said information security microcomputer, said main body and said computer is repeated at predetermined intervals.
11. The program developing system according to claim 8, wherein said main body performs authentication with respect to said computer, and control is performed to stop an operation of at least a part of a function of said main body when the authentication cannot be performed.
12. The program developing system according to claim 8, wherein said main body performs authentication with respect to said
computer and authentication with respect to said information security
microcomputer, and control is performed to stop an operation of at least a
5 part of a function of said information security microcomputer or said main
body when the authentication cannot be performed.
13. The program developing system according to claim 8, wherein said computer receives authentication information from a user, and sends the authentication information to said information security microcomputer,
5 said information security microcomputer determines whether the authentication information received from said computer matches with

authentication information held in advance by said information security microcomputer or not, and

10 said computer performs control not to operate at least a part of a function of said main body when said information security microcomputer determines mismatch of said authentication information.

14. The program developing system according to claim 13, wherein said computer requests a user to reenter the authentication information if input by the user is not performed for a predetermined time or more.

15. The program developing system according to claim 8, further comprising:

5 a network connecting said computer to said main body, wherein said computer sends a program after encrypting said program when said program is to be downloaded into said main body, and
 said main body executes said encrypted program received from said computer after decrypting said encrypted program.